

Figure 1

$I\phi$

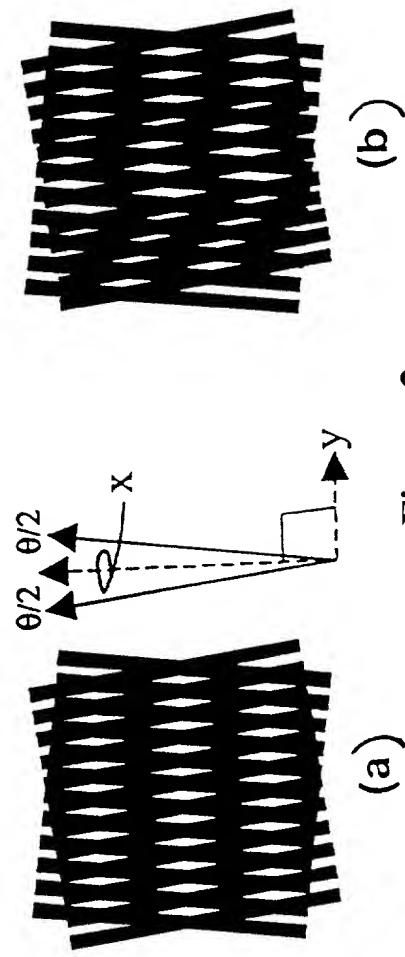
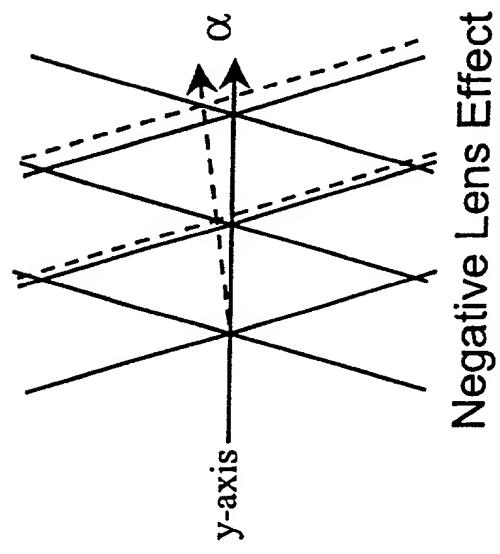


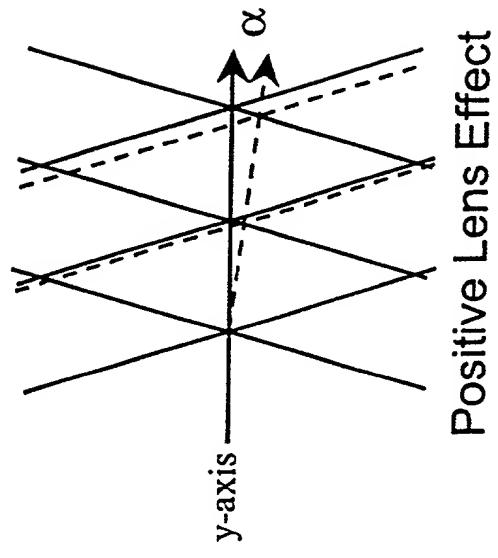
Figure 2

(b)

(a)



(a)

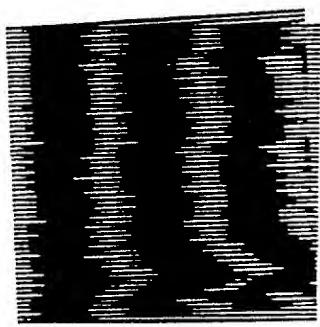


(b)

Figure 3

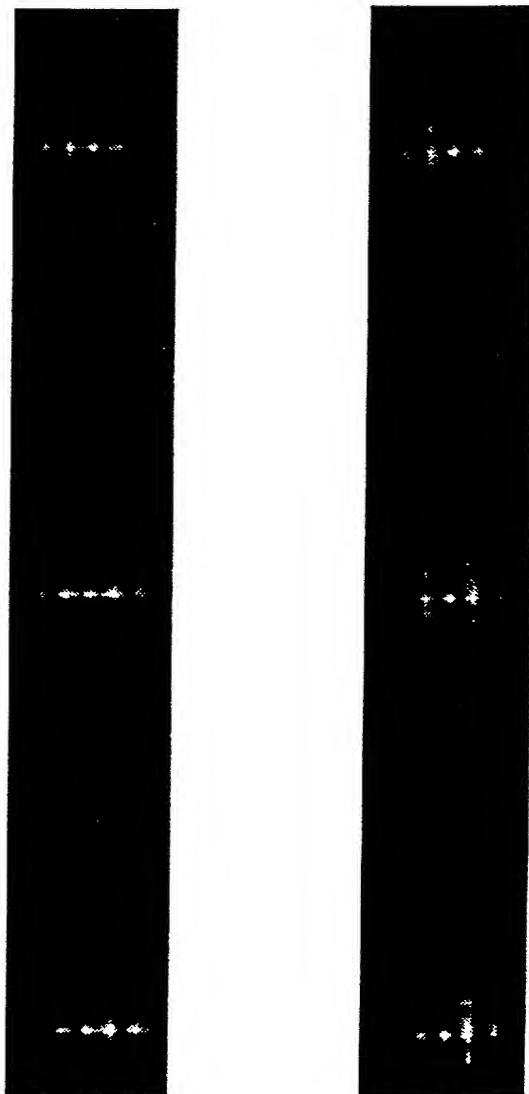


(a)



(b)

Figure 4



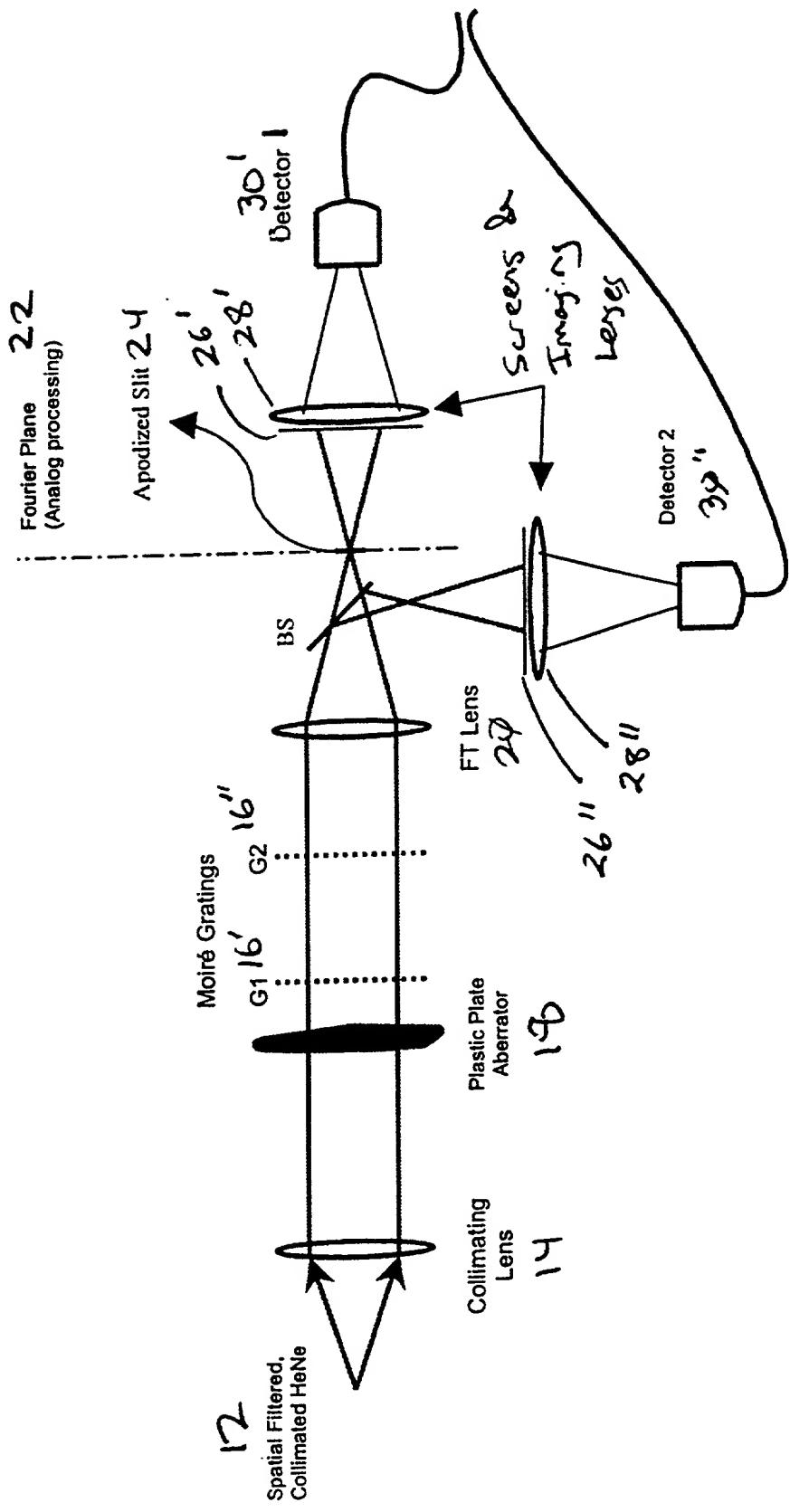


Figure 5

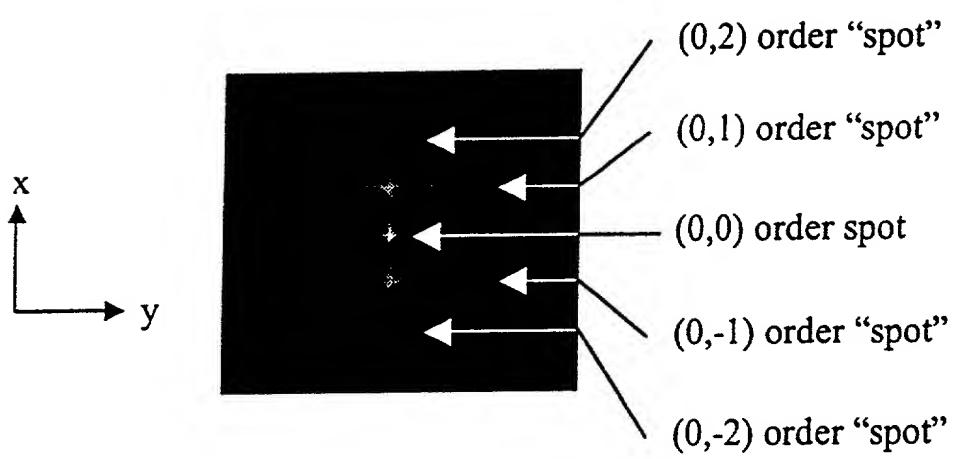


Figure 6

Effect of the slit in the Fourier plane, on the image plane.

These frequency components at the Fourier plane...
...produce this moiré fringe pattern in the image plane

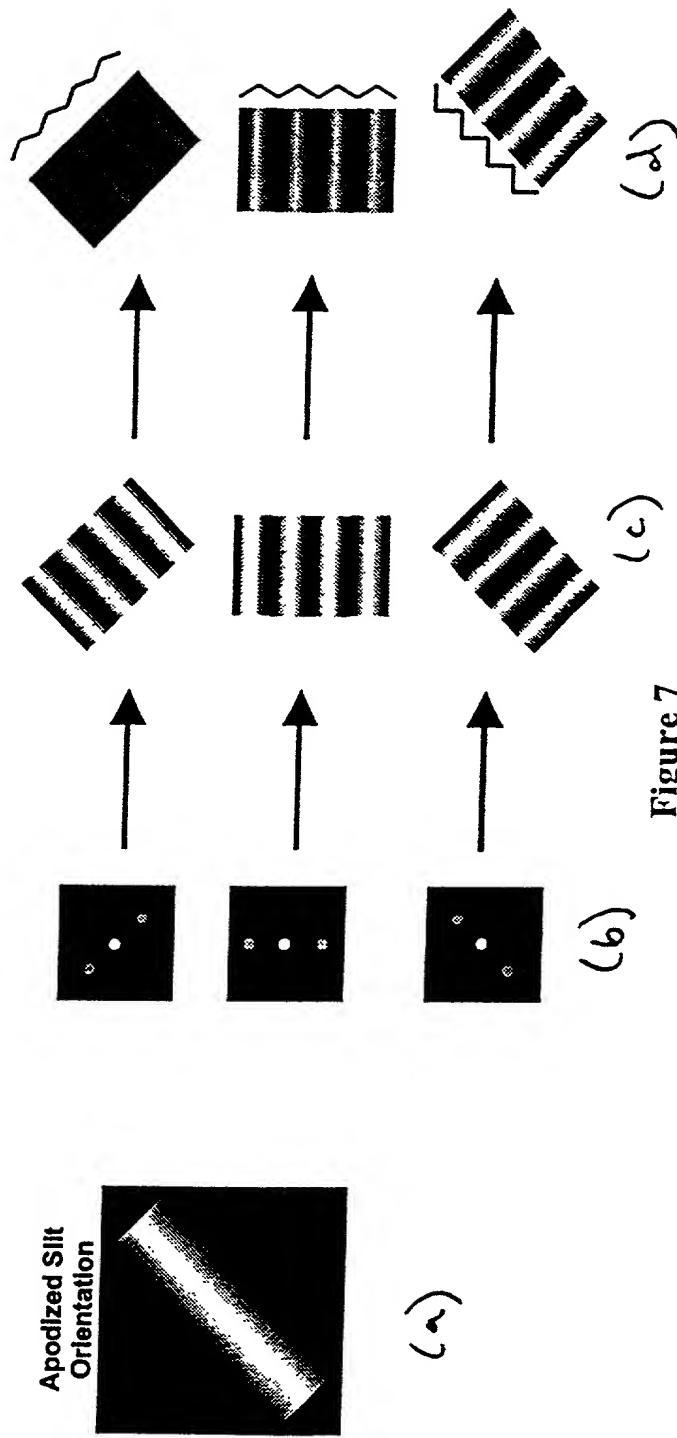
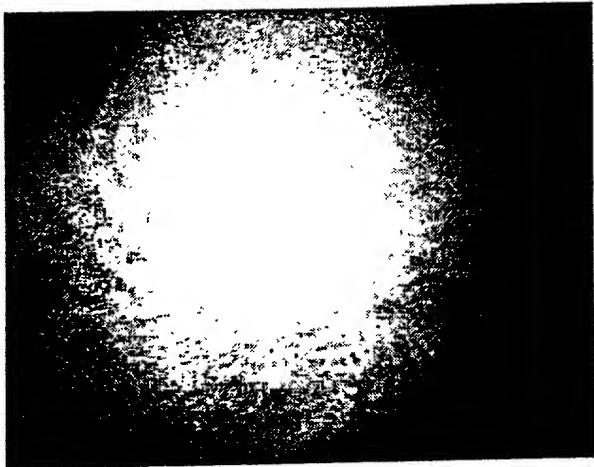


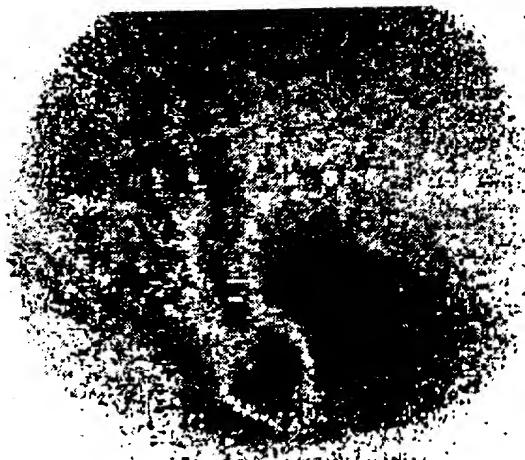
Figure 7



Moiré Deflectogram – Air Slit

- Camera does not resolve fringes.
- Imperfect gratings cause secondary fringes.

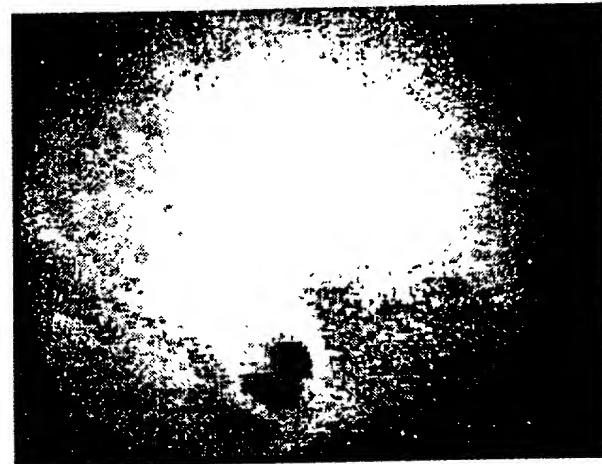
(a)



Normalized Pattern

- All fringe slope information across the profile has equal weighting.
- Proportional to 2nd wavefront derivative.

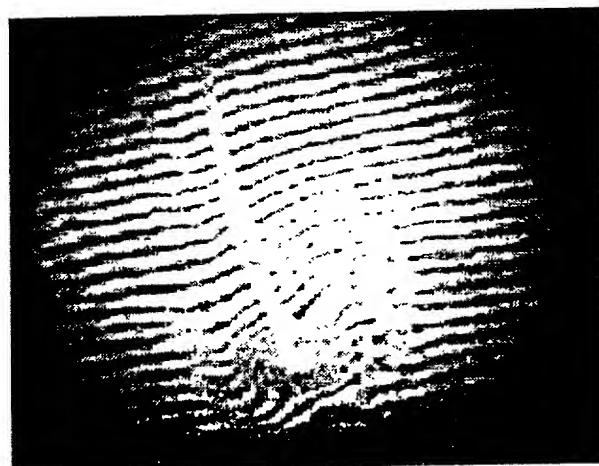
(c)



Moiré Deflectogram Apodized Slit

- Very different intensity pattern.

(b)

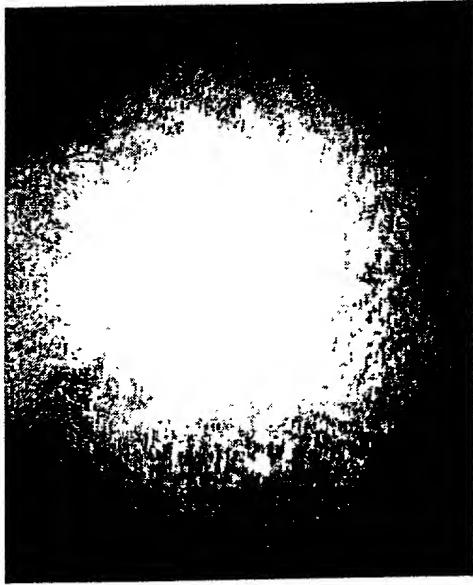


Macroscopic Fringe Deflectogram for Comparison

- Typical deflectogram (camera resolves fringes)

(d)

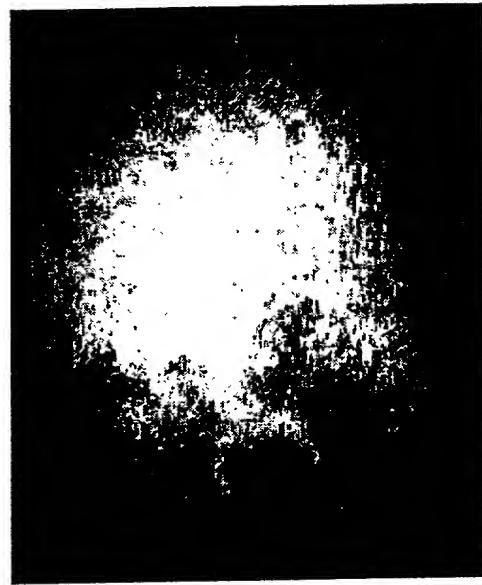
Figure 8



Moiré Deflectogram -- Air Slit

- Camera does not resolve fringes.
- Imperfect gratings cause secondary fringes.

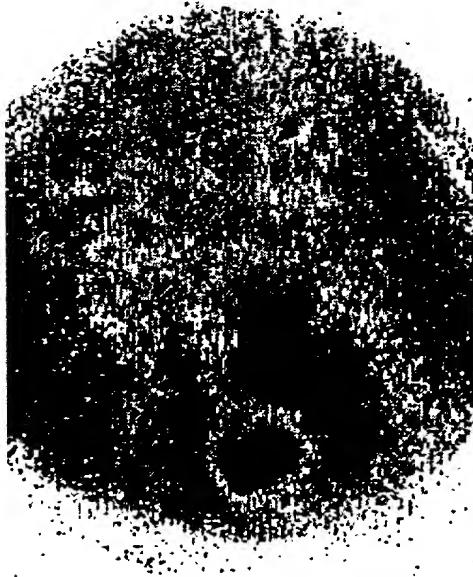
(a)



Moiré Deflectogram -- Apodized Slit

- Very different intensity pattern
- Looks like a 3D surface illuminated from the upper left.

(b)



Normalized Pattern

- All fringe slope information across the profile has equal weighting.

(c)

Figure 9